

**CLAIMS**

1. An electrical coil which is wound so that there are a plurality of layers with each layer having a plurality of turns, wherein an insulating material is  
5 disposed between the turns of each layer.
2. An electrical coil according to claim 1 wherein the insulating material is glass cloth.
- 10 3. An electrical coil which comprises a plurality of layers each with n turns wherein the coil is wound so as to comprise two or more portions each of which has layers which contain fewer than n turns.
4. An electrical coil according to claim 4 wherein insulating material is  
15 disposed between the turns of each layer.
5. An electrical coil according to claim 1 wherein the coil is a shim coil for an MRIS apparatus.
- 20 6. An electrical coil according to claim 3 wherein the coil is a shim coil for an MRIS apparatus.